UTILITIES

ELECTRIC:

JERSEY CENTRAL POWER & LIGHT COMPANY

101 CRAWFORD' S CORNER ROAD, BLDG. I, SUITE I

HOLMDEL, NJ 07733

ATTN: HARVEY LOCKLEY

TELEPHONE: 999 WEST MAIN STREET, FLOOR 2 FREEHOLD NJ, 07728 ATTN: ANTHONY BAVOSA

CABLE:
CABLEVISION OF MONMOUTH COUNTY
40 PINE STREET
TINTON FALLS, NJ
ATTN: PETE MANN

GAS: NEW JERSEY NATURAL GAS COMPANY 1415 WYCKOFF ROAD WALL, NJ 07715

ATTN: ANGELO PAPAGIANNAKIS

SEWER: SOUTH MONMOUTH REGIONAL SEWERAGE AUTHORITY

1235 18TH AVENUE WALL, NJ 07719 ATTN: RYAN KRAUSE

SEWER AND WATER
MANASQUAN DEPARTMENT OF PUBLIC WORKS
201 EAST MAIN STREET
MANASQUAN, NJ 08736
ATTN: KEVIN THOMPSON

RAILROAD
NEW JERSEY TRANSIT RAIL OPERATIONS
NORTH JERSEY COAST LINE
EAST MAIN STREET AT-GRADE CROSSING USDOT# 856979H
ATTN: JOSEPH HADDAD

LOCATION OF UTILITIES SHOWN ON THE PLANS ARE

PLOTTED FROM AVAILABLE DATA ON FILE WITH THE UTILITY COMPANIES AND ARE NOT WARRANTED AS TO EXACTNESS. CONTRACTOR IS TO DETERMINE EXACT LOCATION AND DEPTH OF UTILITIES AT ALL CROSSINGS PRIOR TO CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

GOVERNING BODY

MAYOR

COUNCIL MEMBERS

EDWARD DONOVAN

JEFFREY LEE
JAMES WALSH
MICHAEL W. MANGAN
JAY BRYANT
RICHARD E. READ
GREGG OLIVERA

ADDRESS

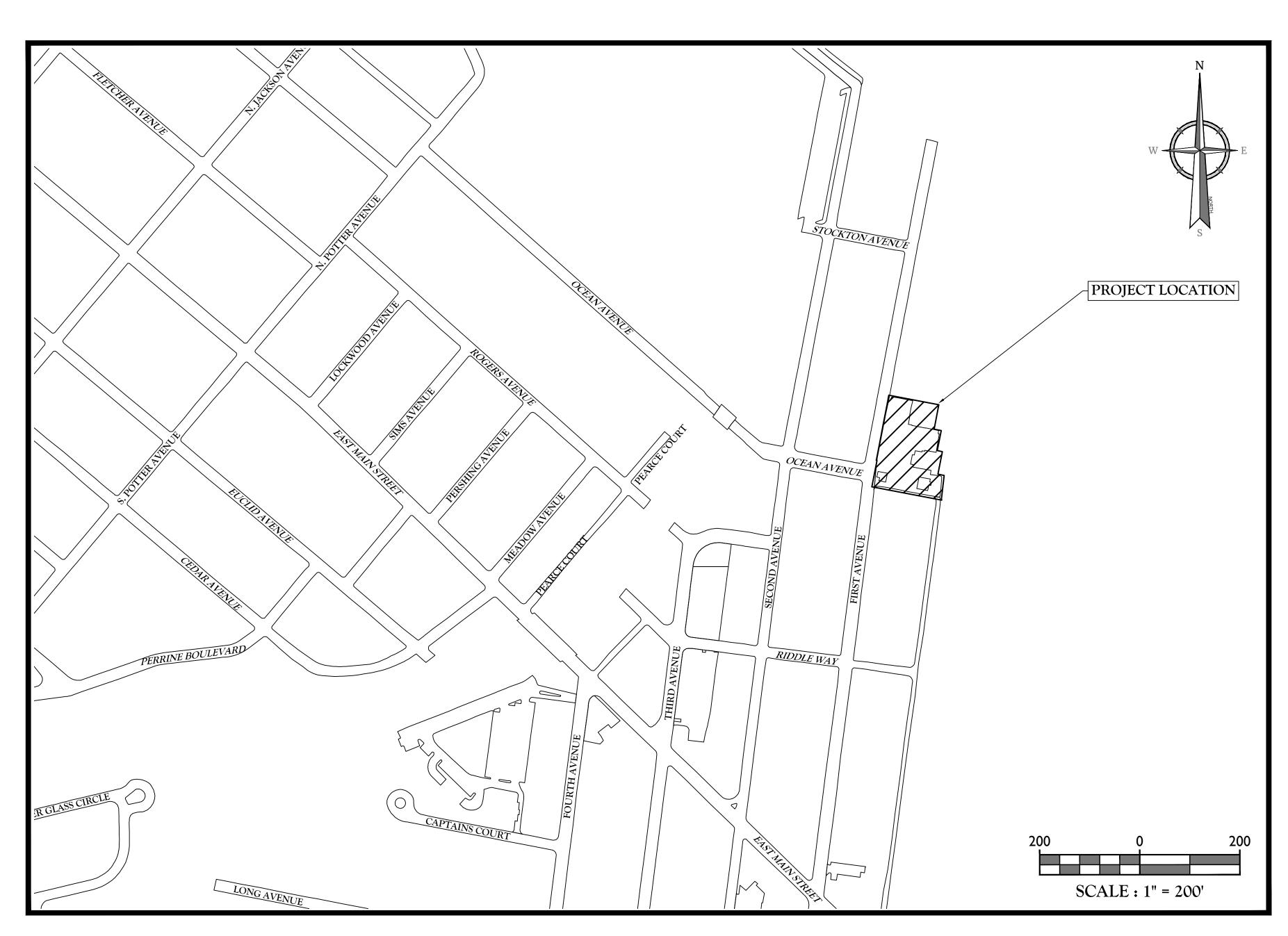
201 EAST MAIN STREET MANASQUAN, NJ 08736 (732) 223-0544

SHT. No. DESCRIPTION LATEST REVISION I COVER SHEET 2 EXISTING CONDITIONS PLAN 3 CONSTRUCTION PLAN 4 GRADING PLAN 5 SOIL EROSION & SEDIMENT CONTROL PLAN

CONSTRUCTION PLANS FOR

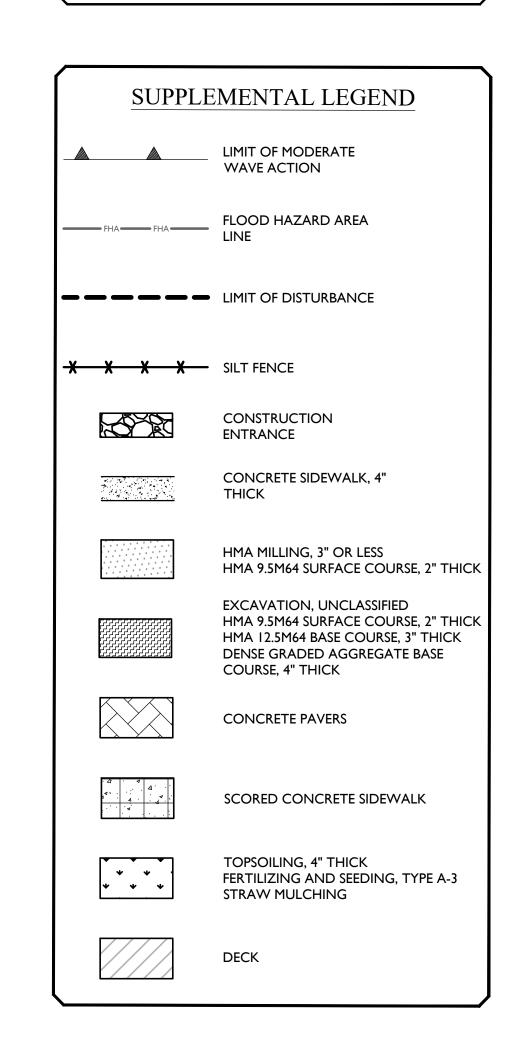
SEA WATCH RECREATIONAL AREA IMPROVEMENTS

BLOCK 165, LOTS 32.01, 32.02, 32.03, 32.04 & 34
BOROUGH OF MANASQUAN
MONMOUTH COUNTY, NEW JERSEY



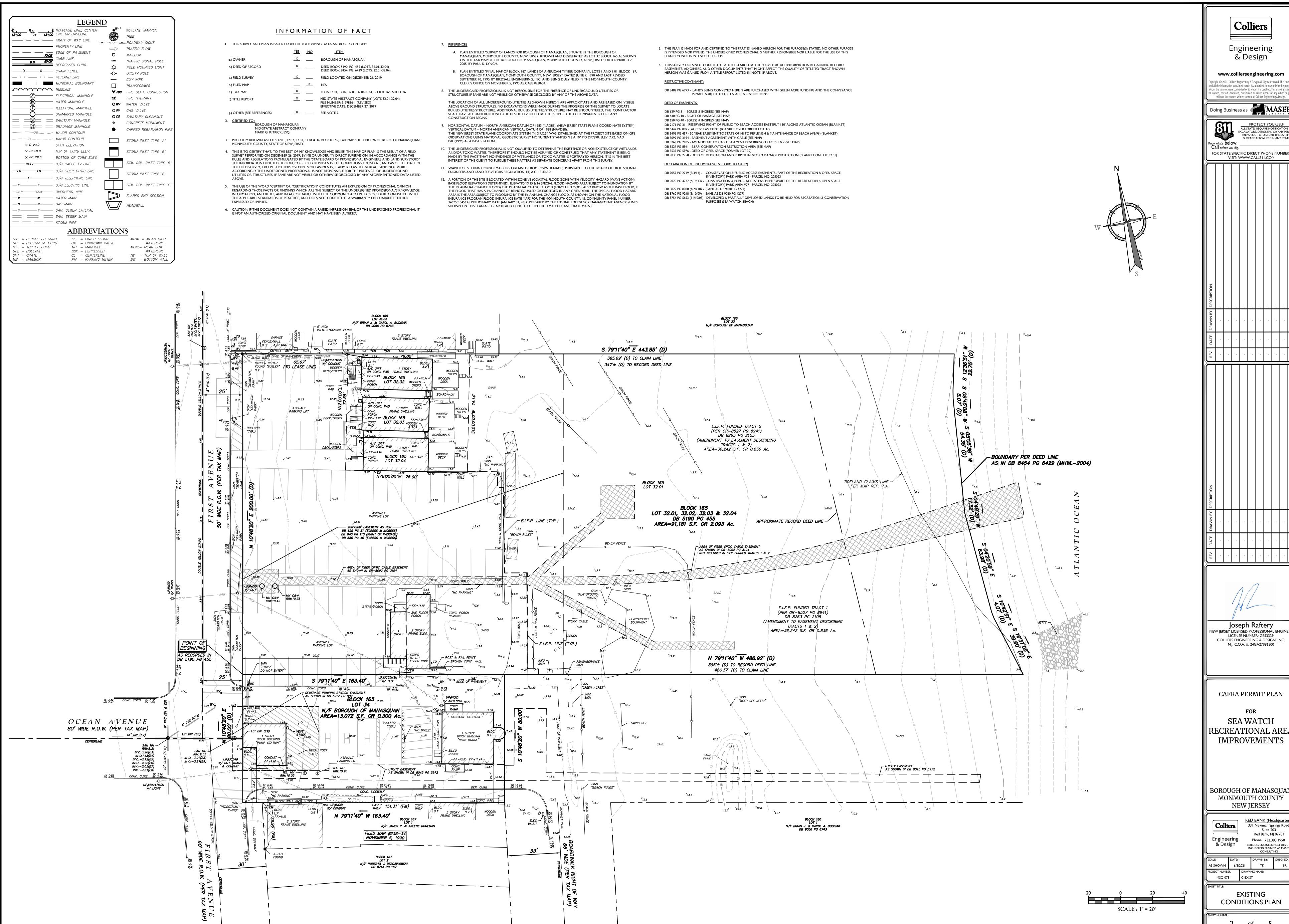
LOCATION MAP

EXISTING	<u>LEGEND</u>	PROPOSED
7L	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	
	RIGHT OF WAY LINE	
——	PROPERTY LINE	
	EDGE OF PAVEMENT	
### FACE BACK	CURB	FACE BACK
	DEPRESSED CURB	
	SIDEWALK	4 4 4
xx	FENCES	xx
~~~~~	TREELINE	······
<del></del>	ROADWAY SIGNS	<del>-</del>
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	'B' INLET	
	'E' INLET	
<u></u>	STORM MANHOLE	
S	SANITARY MANHOLE	<b>S</b>
	FLARED END SECTION	
	HEADWALL	
*	HYDRANT	×
<b>\$</b>	POLE MOUNTED LIGHT	
75 — —	CONTOURS	75
× G 29.0	SPOT ELEVATION	<b>x</b> G 29.0
	DIRECTION OF OVERLAND FLOV	v — <del>-</del>
× TC 29.0	TOP OF CURB ELEVATION	<b>★</b> TC 29.0
× BC 29.0	BOTTOM OF CURB ELEVATION	<b>★</b> BC 29.0
то	P OF DEPRESSED CURB ELEVATION	ON <b>x</b> TDC 29.0
CATV	CABLE TV CONDUIT	CATV
w	WATER MAIN	w
	GAS MAIN	G
	TELEPHONE CONDUIT	т
E	ELECTRIC CONDUIT	——— Е-———
	SANITARY PIPE	
	STORM PIPE	



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Joseph Raftery  NEW JERSEY LICENSED PROFESSIONAL ENGINEER LICENSE NUMBER: GE53339  COLLIERS ENGINEERING & DESIGN, INC.  N.J. C.O.A. #: 24GA27986500				EER .						
FOR SEA WATCH RECREATIONAL AREA IMPROVEMENTS										
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Colliers  331 Newman Springs Road, Suite 203 Red Bank, NJ 07701 Phone: 732.383.1950 COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING  SCALE: DATE: DRAWN BY: CHECKED BY:			GN,							
AS SHOWN 6/8/2021 TK JJR PROJECT NUMBER: DRAWING NAME: MSQ-078 C-CVER										
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NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION



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Joseph Raftery NEW JERSEY LICENSED PROFESSIONAL ENGINEER LICENSE NUMBER: GE53339 COLLIERS ENGINEERING & DESIGN, INC. N.J. C.O.A. #: 24GA27986500

CAFRA PERMIT PLAN

SEA WATCH RECREATIONAL AREA **IMPROVEMENTS** 

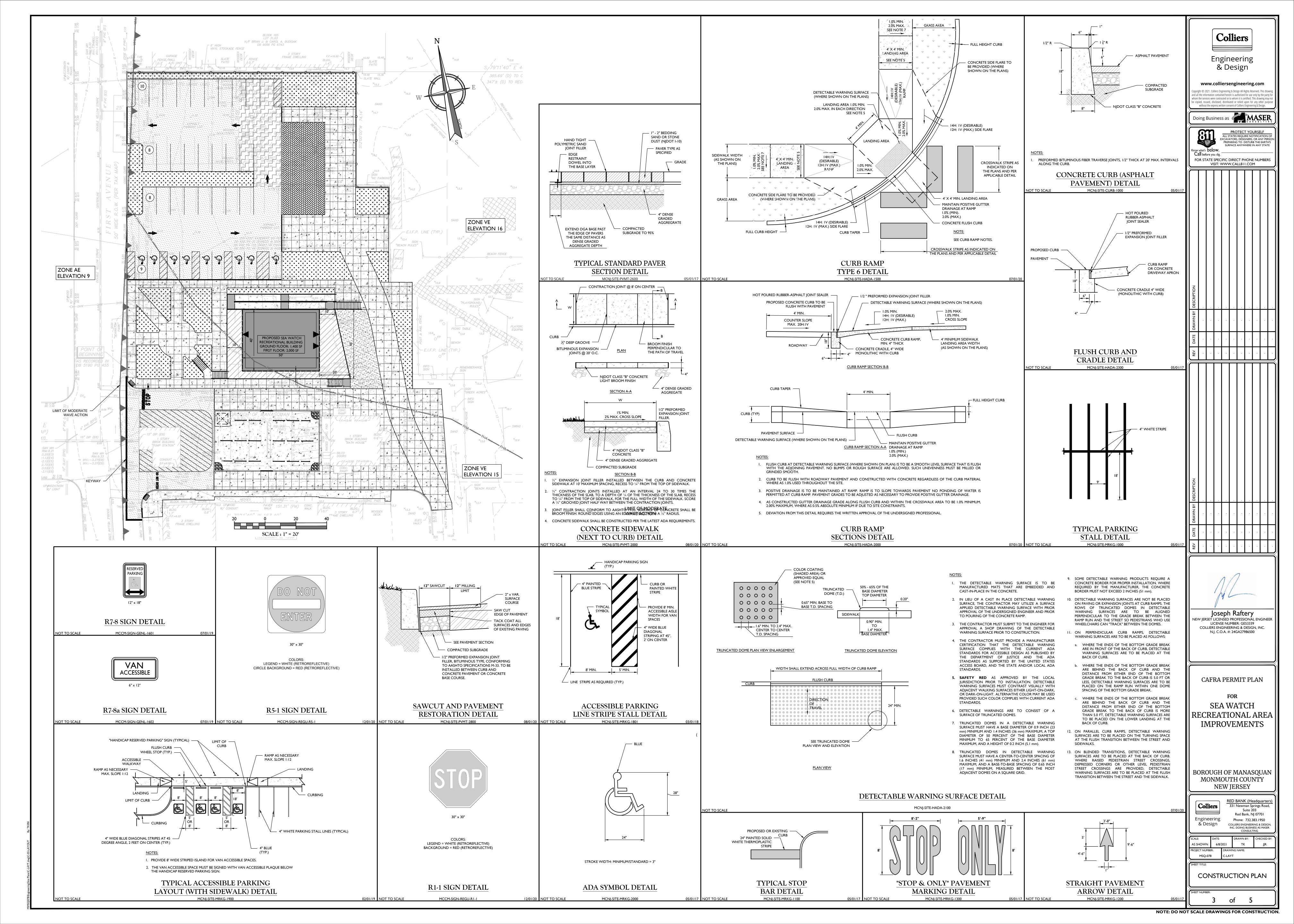
BOROUGH OF MANASQUAN MONMOUTH COUNTY **NEW JERSEY** 

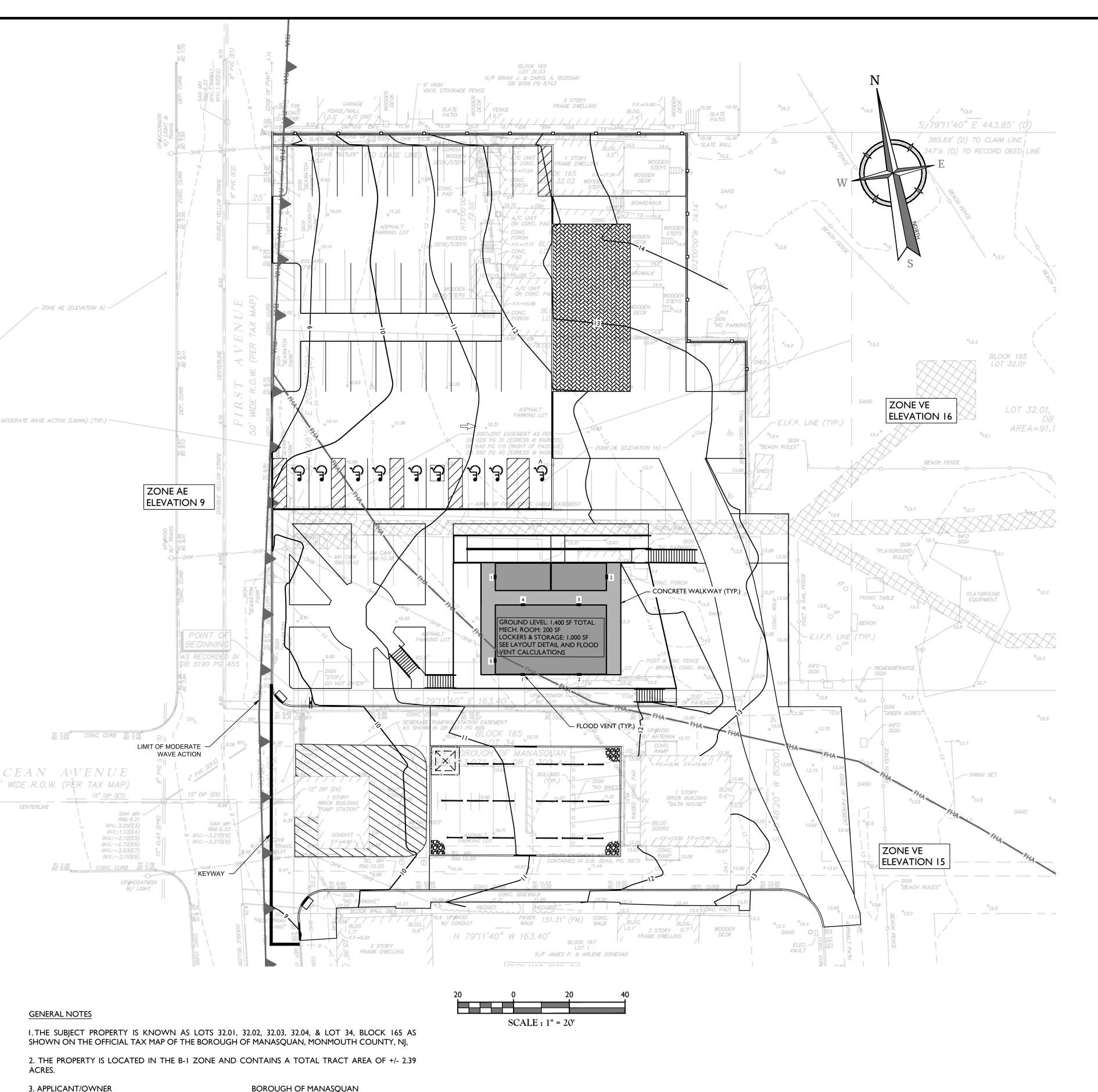
RED BANK (Headquarters 331 Newman Springs Road, Suite 203 Red Bank, NJ 07701 Phone: 732.383.1950

**EXISTING** CONDITIONS PLAN

of 5

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION





3. APPLICANT/OWNER

BOROUGH OF MANASQUAN 201 EAST MAIN STREET MANASQUAN, NJ

4. THE TOPOGRAPHIC SURVEY INFORMATION SHOWN HEREON IS TAKEN FROM A PLAN ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY FOR MANASQUAN SEA WATCH RECREATIONAL AREA IMPROVEMENTS, BLOCK 165, LOTS 32.01, 32.02, 32.03, 32.04, AND 34, BOROUGH OF MANASQUAN, MONMOUTH COUNTY, NEW JERSEY PREPARED BY MASER CONSULTING P.A. DATED 1/15/20.

5. HORIZONTAL DATUM: NAD1983 VERTICAL DATUM: NAVD1988

6. A PORTION OF THE SITE IS LOCATED WITHIN SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD, (THE 1% ANNUAL CHANCE FLOOD (100-YEAR FLOOD), ALSO KNOWN AS THE BASE FLOOD, IS THE FLOOD THAT HAS A 1% CHANCE OF BEING EQUALED OR EXCEEDED IN ANY GIVEN YEAR. THE SPECIAL FLOOD HAZARD AREA IS THE AREA SUBJECT TO FLOODING BY THE 1% ANNUAL CHANCE FLOOD) ZONE VE, ELEV. 15 & 16 (COASTAL FLOOD ZONE WITH VELOCITY HAZARD (WAVE ACTION); BASE FLOOD ELEVATIONS DETERMINED) AS SHOWN ON THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP FOR MONMOUTH COUNTY, NJ, COMMUNITY PANEL NUMBER 34025C0456 G, EFFECTIVE DATE SEPTEMBER 25, 2009, PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY. (LINES SHOWN ON THIS PLAN ARE GRAPHICALLY DEPICTED FROM THE FEMA INSURANCE RATE MAPS.)

7. THIS IS AN INDIVIDUAL PERMIT PLAN FOR THE CONSTRUCTION OF A RAISED ONE STORY LIFEGUARD AND RETAIL FACILITY WITH ACCOMPANYING SITE IMPROVEMENTS.

8. THIS SET OF PLANS HAS BEEN PREPARED FOR THE PURPOSES OF NJDEP REVIEW ONLY.

9. THIS PLAN IS NOT A SURVEY.

10. DO NOT SCALE DRAWINGS AS THEY PERTAIN TO ADJACENT AND SURROUNDING PHYSICAL CONDITIONS, BUILDINGS, STRUCTURES, ETC. THEY ARE SCHEMATIC ONLY, EXCEPT WHERE DIMENSIONS ARE SHOWN THERETO.

II. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS.

12. THIS PLAN IS NOT DEPICTING ENVIRONMENTAL CONDITIONS OR A CERTIFICATION/WARRANTY REGARDING THE PRESENCE OR ABSENCE OF ENVIRONMENTALLY IMPACTED SITE CONDITIONS. COLLIERS ENGINEERING AND DESIGN HAS PERFORMED NO EXPLORATORY OR TESTING SERVICES. INTERPRETATIONS, CONCLUSIONS, OR OTHER SITE ENVIRONMENTAL SERVICES RELATED TO THE DETERMINATION OF THE POTENTIAL FOR CHEMICAL, TOXIC, RADIOACTIVE, OR OTHER TYPE OF CONTAMINANTS AFFECTING THE PROPERTY AND THE SURROUNDINGS, THE UNDERSIGNED PROFESSIONAL IS NOT QUALIFIED TO DETERMINE THE EXISTENCE OF SAME. SHOULD ENVIRONMENTAL CONTAMINATION OR WASTE BE DISCOVERED, THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LAWS AND REGULATIONS.

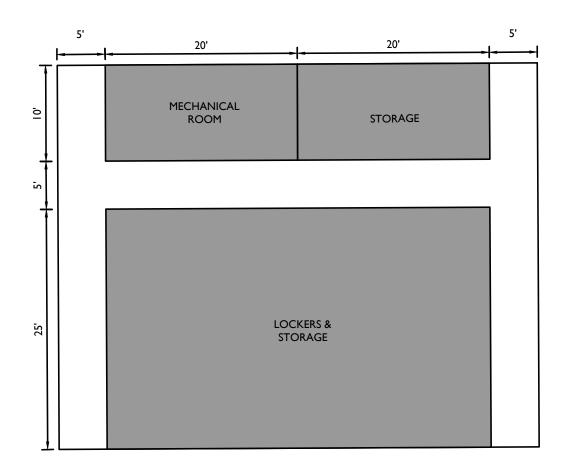
13. THE OWNER IS RESPONSIBLE FOR PROJECT SAFETY, INCLUDING PROVISION OF ALL APPROPRIATE SAFETY DEVICES AND TRAINING REQUIRED.

14. PURSUANT TO THE NEW JERSEY ONE CALL LAW, CONTRACTOR SHALL CALL 1-800-272-1000 OR 811 PRIOR TO ANY EXCAVATION TO REQUEST A MARKOUT OF UNDERGROUND UTILITIES.

15. THESE GENERAL NOTES SHALL APPLY TO ALL SHEETS IN THIS SET.

### DATUM CHART

BENCHMARK KV 0834 (853 2591 MAN RM	1 TIDA	L) ELEV.	6.44 (NA	AVD88)
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9.04,	4.85			
	4			
MEAN HIGHER HIGH WATER (MHHW)	<u> </u>	ELEV.	1.93	
SPRING HIGH WATER				
MEAN HIGH WATER (MHW)	,	ELEV.	1.59	
				•
MEAN TIDE LEVEL		E1 E1 /	0.44	
MEAN TIDE LEVEL		ELEV.	0.41	•
MEAN LOW WATER (MLW)		ELEV.	-2 41	
MENT 2011 WITTER (MENT)	<u> </u>		2. 11	9, 1
MEAN LOWER LOW WATER (MLLW)	ļ	ELEV.	-2.60	0.19



GROUND FLOOR LAYOUT - ELEVATION 12'

### KITCHEN COUNTER SERVICE LIFEGUARD FACILITIES COMMON AREA/ EATING AREA LIFEGUARD OFFICES **SUNDRIES** STORE

FINISHED FIRST FLOOR LAYOUT - ELEVATION 22'

### FLOOD VENT CALCULATIONS:

- TOTAL BUILDING AREA ENCLOSED = 1,400 SF
- USE SMART VENT. ONE VENT = 200 SF OF BUILDING AREA
- BUILDING AREA (1,400 SF/200) = 7 VENTS NEEDED
- ALL SMART VENTS TO BE PLACED NO MORE THAN I FOOT ABOVE FINISHED GRADE,

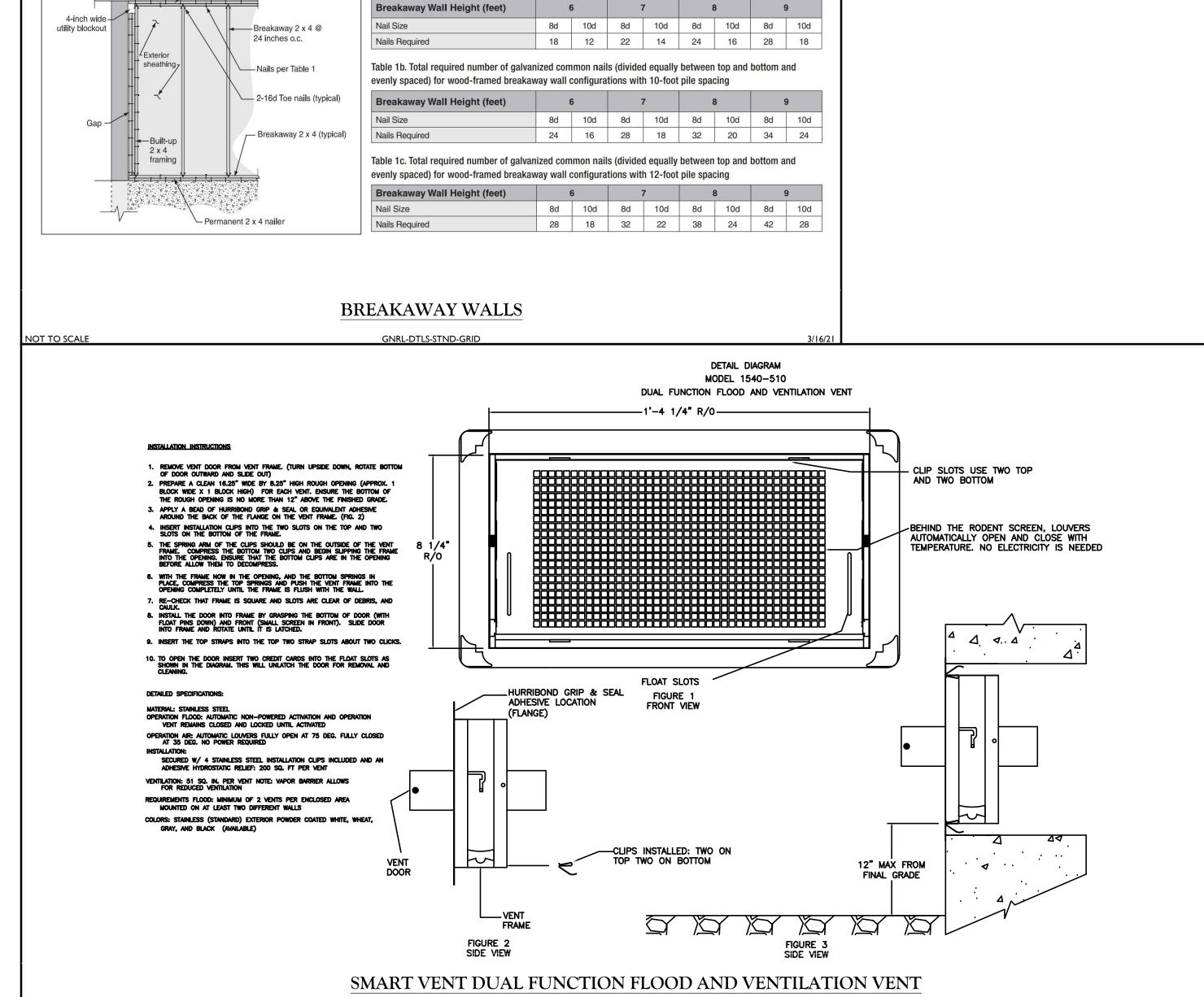


Table 1a. Total required number of galvanized common nails (divided equally between top and bottom) for

wood-framed breakaway wall configurations with 8-foot pile spacing

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CAFRA PERMIT PLAN

SEA WATCH RECREATIONAL AREA **IMPROVEMENTS** 

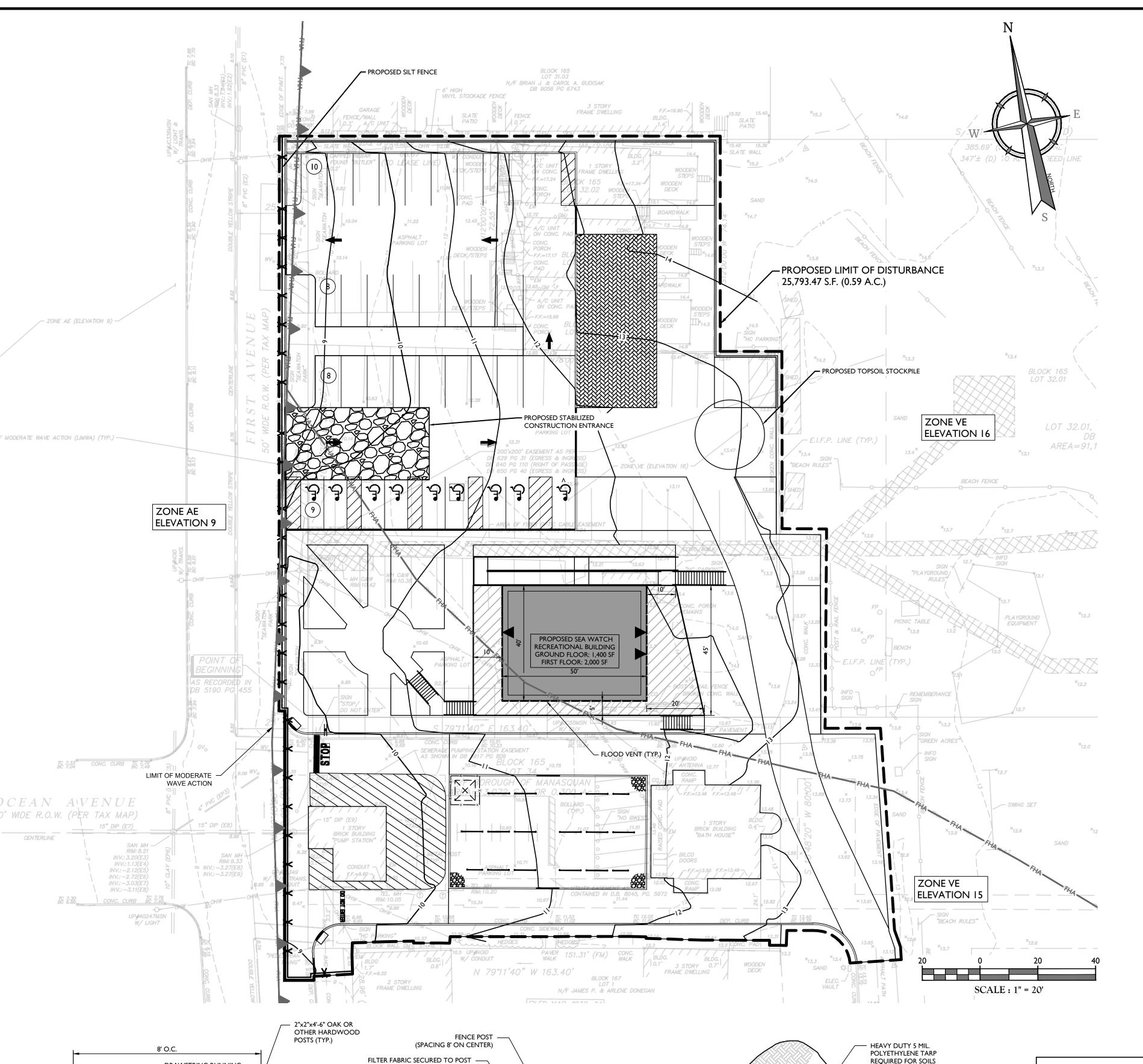
BOROUGH OF MANASQUAN MONMOUTH COUNTY **NEW JERSEY** 

Colliers 331 Newman Springs Road Suite 203 Red Bank, NJ 07701 Engineering Phone: 732.383.1950 COLLIERS ENGINEERING & DESIGI INC. DOING BUSINESS AS MASER

6/8/2021 RAWING NAME: MSQ-078

GRADING PLAN

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



### FREEHOLD SOIL CONSERVATION DISTRICT NOTES

MOD: 01/29/19 MCNJ-SOIL-NOTE-1005 I. THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED FORTY-EIGHT (48) HOURS IN

ADVANCE OF ANY SOIL DISTURBING ACTIVITY 2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO SOIL

DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE

THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS. 4. N.J.S.A 4:24-39 ET. SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE

DISTRICT DETERMINES THAT A PROIECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH THE CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW IERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED. UPON WRITTEN REQUEST FROM THE APPLICANT, THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT-BY-LOT OR SECTION-BY-SECTION BASIS, PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE SEQUENCE OF DEVELOPMENT AND TEMPORARY MEASURES. FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.

ANY STOCKPILE OR DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN FOURTEEN (14) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORAR SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF 2 TO 2 ½ TONS PER ACRE, ACCORDING TO THE STANDARD FOR STABILIZATION WITH MULCH ONLY.

6 IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. SOIL STOCKPILES, STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT AND A MULCH ANCHOR, IN ACCORDANCE WITH STATE STANDARDS.

7. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF THE PRELIMINARY GRADING.

8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A PAD OF CLEAN CRUSHED STONE AT POINTS WHERE TRAFFIC WILL BE ACCESSING THE CONSTRUCTION SITE. AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOTS REQUIRE A STABILIZED CONSTRUCTION ACCESS CONSISTING OF ONE INCH TO TWO INCH (I" - 2") STONE FOR A MINIMUM LENGTH OF TEN FEET (10') EQUAL TO THE LOT ENTRANCE WIDTH. ALL OTHER ACCESS POINTS SHALL BE BLOCKED OFF.

9. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAYS WILL BE REMOVED IMMEDIATELY.

10. PERMANENT VEGETATION IS TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING.

II. AT THE TIME THAT SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE

12. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS/ACRE, (OR 450 LBS/I,000 SQ FT OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12" OF SETTLED SOIL WITH A PH OF 5 OR MORE,

OR 24" WHERE TREES OR SHRUBS ARE TO BE PLANTED. 13. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.

14. UNFILTERED DEWATERING IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH THE STANDARD FOR DEWATERING.

15. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE

16. STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE

17. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #6.

18. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE

> FREEHOLD SOIL CONSERVATION DISTRICT 4000 KOZLOSKI ROAD, FREEHOLD, NJ 07728-5033 PHONE (732) 683-8500, FAX (732) 683-9140, EMAIL: INFO@FREEHOLDSCD.ORG.

APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.

### **CONSTRUCTION SEQUENCE**

IMPLEMENTATION OF SOIL EROSION & SEDIMENT CONTROL MEASURES INCLUDING: - INLET FILTER

- CONSTRUCTION DRIVEWAY

CONSTRUCT IMPROVEMENTS - SITE CLEARING, GRADING AND EXCAVATION - INSTALL CURB AND SIDEWALK - MILLING AND PAVING - TOPSOILING, FERTILIZING AND SEEDING, AND STRAW MULCHING

- PERMANENT VEGETATIVE COVERAGE & SITE RESTORATION - REMOVAL OF SOIL EROSION & SEDIMENT CONTROL MEASURES TOTAL ESTIMATED PROJECT DURATION: 6 WEEKS

THIS SEQUENCE OF CONSTRUCTION IS FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY AND SHALL NOT BE USED FOR ANY OTHER PURPOSE.

THE CONTRACTOR SHALL BRING APPLICABLE SURFACES TO SUBGRADE AND STABILIZE AS PER DETAILS TO CONTROL STORMWATER RUNOFF.

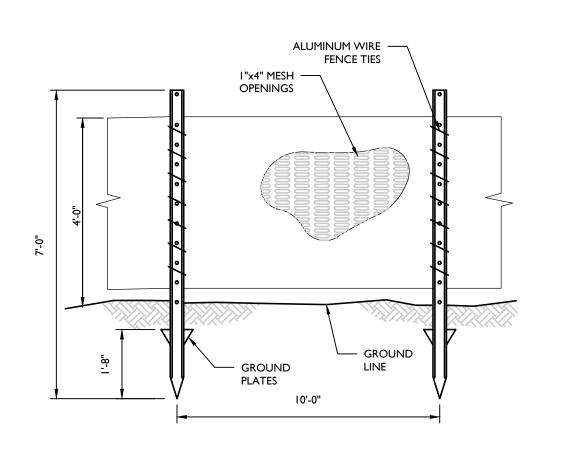
### IMPERVIOUS CALCULATIONS AREA (AC) AREA (SF) 50,753 PROJECT SIZE **EXISTING CONDITIONS IMPERVIOUS AREA** 45,725 5,028 PERVIOUS AREA PROPOSED CONDITIONS **IMPERVIOUS AREA** 44,150 6,603 PERVIOUS AREA

### TOPSOIL STOCKPILE DETAIL MCNJ-SOIL-EROS-2500

I. ALL STOCKPILES SHALL NOT TO BE LOCATED WITHIN 50 FEET OF A FLOODPLAIN, SLOPE,

ROADWAY OR DRAINAGE FACILITY

TESTED AT 4.5 PH OR



FENCE DETAIL

### STANDARD FOR VEGETATIVE COVER

GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.

B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING.

C. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO AN AVERAGE DEPTH OF 5 INCHES. MINIMUM OF 4 INCHES FIRMED IN PLACE IS REQUIRED. ALTERNATIVE DEPTHS MAY BE CONSIDERED WHERE SPECIAL REGULATORY AND/OR INDUSTRY DESIGN STANDARDS ARE APPROPRIATE SUCH AS ON GOLF COURSES, SPORTS FIELDS, LANDFILL CAPPING ETC. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.

D. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE-STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND

A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SITE SPECIFIC SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/).

a. FOR TEMPORARY SEEDING: FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. LIMING RATE SHALL BE ESTABLISHED PER

b. FOR PERMANENT SEEDING: FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE DR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ONE-HALF RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING.

WITH A DISC, SPRING-TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED

C. HIGH ACID PRODUCING SOIL. SOILS HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDE

SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5 OR MORE BEFORE

B. WORK LIME AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES

INITIATING SEEDBED REPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC REQUIREMENTS. D. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION. THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE

THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.). SEE "SOIL **DECOMPACTION AND TESTING REQUIREMENTS"** E. REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION AND OTHER DEBRIS SUCH AS WIRE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS OR OTHER UNSUITABLE

A. TEMPORARY SEEDING SPECIFICATIONS - TEMPORARY VEGETATIVE COVER SHALL CONSIST OF PERENNIAL RYEGRASS APPLIED UNIFORMLY AT A RATE OF 1.0 POUNDS PER 1,000 SQ.FT. (100 LBS/ACRE), OR A MIXTURE FROM TABLE 7-2 OF THE STANDARDS APPROVED BY THE SOIL

B. PERMANENT SEEDING SPECIFICATIONS - SELECT AN APPROVED MIXTURE FROM THOSE LISTED BELOW, AN APPROVED MIXTURE FROM TABLE 4-3 OF THE STANDARDS, OR USE A MIXTURE RECOMMENDED BY RUTGERS COOPERATIVE EXTENSION OR NATURAL RESOURCES CONSERVATION SERVICE WHICH IS APPROVED BY THE SOIL CONSERVATION DISTRICT. SEED GERMINATION SHALL HAVE BEEN TESTED WITHIN 12 MONTHS OF THE PLANTING DATE. NO SEED SHALL BE ACCEPTED WITH A GERMINATION TEST DATE MORE THAN 12 MONTHS OLD UNLESS RETESTED. SEED SHALL BE

APPLIED AS NOTED BELOW WITHIN THE DATES SPECIFIED IN THE STANDARDS:

I. LAWN AREAS MIX #13 (WELL TO MODERATELY DRAINED SOIL): HARD FESCUE AND/OR CHEWING FESCUE AND/OR

STRONG CREEPING RED FESCUE 175 LBS/ACRE PERENNIAL RYEGRASS 45 LBS/ACRE KENTUCKY BLUE GRASS (BLEND) 45 LBS/ACRE

8/15 - 10/30 (ZONE 7a) ACCEPTABLE SEEDING DAT

**OPTIMUM SEEDING DATES:** 

2/1 - 4/30 ZONE 7a) SUMMER SEEDING DATES *: 5/1 - 8/14 (ZONE 7a)

* NOTE: SUMMER SEEDING SHOULD ONLY BE CONDUCTED WHEN THE SITE IS IRRIGATED. MIXES INCLUDING WHITE CLOVER REQUIRE THAT AT LEAST SIX WEEKS OF GROWING SEASON REMAIN AFTER SEEDING TO ENDURE ESTABLISHMENT BEFORE FREEZING

C. CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND. CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER, EXCEPT FOR DRILLED. HYDROSEEDED OR CULTIPACKED SEEDINGS. SEED SHALL BE INCORPORATED INTO THE SOIL WITHIN 24 HOLIRS OF SEEDBED PREPARATION TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING.

DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE-TEXTURED SOIL.

D. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.

E. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK, OR TRAILER-MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED. WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDED MUICH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT-FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING (ALSO SEE SECTION 4 - MULICHING BELOW). HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. WHEN POOR SEED TO SOIL CONTACT OCCURS, THERE IS A REDUCED SEED GERMINATION AND GROWTH.

mulching is required on all seeding. Mulch will protect against erosion before grass is ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS MULCHING REQUIREMENT.

A. STRAW OR HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, TO BE APPLIED AT THE RATE OF I-I/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER I,000 SQUARE FEET), EXCEPT THAT WHERE A

### DUST CONTROL

MCNJ-SOIL-NOTE-1400 DUST CONTROL METHODS:

1. APPLY MULCHES OR VEGETATIVE COVER AS PER NJ SOIL EROSION AND SEDIMENT CONTROL B. COMPACTION TESTING METHODS

2. TILL AND ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART AND SPRING-TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

3. SPRINKLE THE SITE UNTIL THE SURFACE IS WET.

4. ERECT BARRIERS SUCH AS SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL TO CONTROL AIR CURRENTS AND SOIL

5. APPLY CALCIUM CHLORIDE IN THE FORM OF LOOSE, DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. NOT SUITABLE ON STEEPER SLOPES NEAR THE STREAMS OR POTENTIALLY ACCUMULATE AROUND PLANTS.

6. COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

7. USE SPRAY-ON ADHESIVE ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS. MATERIALS AS FOLLOWS:

MATERIAL	WATER DILUTION	TYPE OF NOZZLE	APPLY GALLONS/ACRE	
ANIONIC ASPHALT EMULSION	7:1	COARSE SPRAY	1200	
LATEX EMULSION	12.5:1	FINE SPRAY	235	
RESIN IN WATER	4:1	FINE SPRAY	300	
POLYACRYLAMIDE (PAM) - SPRAY ON POLYACRYLAMIDE (PAM) - DRY SPREAD	APPLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS MAY ALSO BE USED AS AN ADDITIVE TO SEDIMENT BASINS TO FLOCCULATE AND PRECIPITATE SUSPENDED COLLOIDS SEE SEDIMENT BASIN STANDARD, P. 26-1			
ACIDULATED SOY BEAN SOAP STICK	NONE	COARSE SPRAY	1200	

RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.

APPLICATION - SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT AT LEAST 85% OF THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.

CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE

ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA. STEEPNESS OF SLOPES, AND COSTS.

SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE

. PEG AND TWINE - DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL

2. MULCH NETTINGS - STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.

3. CRIMPER (MULCH ANCHORING COULTER TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.

4. LIQUID MULCH-BINDERS - MAY BE USED TO ANCHOR SALT HAY, HAY OR STRAW MULCH.

a. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH. IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.

### b. USE ONE OF THE FOLLOWING:

I) ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER-BASED, HYDROPHILIC MATERIALS WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURF GRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.

2) SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND, FOLLOWING APPLICATION OF MULCH, DRYING AND CURING, SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. BINDER SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF

NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A RECOMMENDATION OF THESE PRODUCTS TO THE EXCLUSION OF OTHER

B. WOOD-FIBER OR PAPER-FIBER MULCH - SHALL BE MADE FROM WOOD. PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS. USED AT THE RATE OF 1.500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

MAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS, AND COLORING AGENTS. THE DRY PELLETS, WHEN APPLIED TO A SEEDED AREA AND WATERED, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 LBS/I,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS, SEEDED AREAS WHERE WEED- SEED FREE MULCH IS DESIRED, OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE. APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.

. PELLETIZED MULCH - COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH

IF SOIL MOISTURE IS DEFICIENT SUPPLY NEW SEEDING WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH APPLIED UP TO TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.

NO FOLLOW-UP TOPDRESSING IS MANDATORY UNLESS WHERE GROSS NITROGEN DIFICIENCY EXISTS IN THE SOIL TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10-10-10 OR EQUIVALENT AT 300 LB PER ACRE OR 7 LB PER 1,000 SF EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.

THE QUALITY OF PERMANENT VEGETATION RESTS WITH THE CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDBED, APPLYING NUTRIENTS, MULCH AND OTHER MANAGEMENT ARE ESSENTIAL THE SEED APPLICATION RATES IN TABLE 4-2 ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION N APPLICATION RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUESTING A REPORT OF COMPLIANCE FROM THE DISTRICT. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER (OF THE SEEDED SPECIES) AND MOWED ONCE. NOTE THIS DESIGNATION OF MOWED ONCE DOES NOT GUARANTEE THE PERMANENCY OF THE TURF SHOULD OTHER MAINTENANCE FACTORS BE NEGLECTED OR OTHERWISE MISMANAGED.

### SOIL DECOMPACTION AND **TESTING REQUIREMENTS**

SOIL COMPACTION TESTING REQUIREMENTS

7. ESTABLISHING PERMANENT VEGETATIVE STABILIZATION:

SUBGRADE SOILS PRIOR TO THE APPLICATION OF TOPSOIL "STANDARD FOR VEGETATIVE COVER" NOTES SHALL BE FREE OF EXCESSIVE COMPACTION TO A **DEPTH OF 6.0 INCHES** TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER (SEE "STANDARD FOR VEGETATIVE COVER" NOTES FOR TOPSOIL REQUIREMENTS).

2. Areas of the site which are subject to compaction testing and/or mitigation are GRAPHICALLY DENOTED ON THE SOIL EROSION CONTROL PLAN. MINIMUM 2 TESTS FOR LIMIT OF DISTURBANCE UP TO I ACRE, PLUS 2 TESTS PER ACRE OF LIMIT OF DISTURBANCE THEREAFTER, SPACED EVENLY THROUGHOUT THE SITE.

3. COMPACTION TESTING LOCATIONS ARE DENOTED ON THE PLAN, A COPY OF THE PLAN SHALL BE USED TO MARK THE LOCATIONS OF TESTS AND ATTACHED TO THE COMPACTION REMEDIATION FORM, AVAILABLE FROM THE LOCAL SOIL CONSERVATION DISTRICT. THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF

4. IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE PROBING OR PENETRATION TESTING METHODS (SEE DETAILS), THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM EITHER (I) OMPACTION MITIGATION OVER THE ENTIRE MITIGATION AREA DENOTED ON THE PLAN (excluding exempt areas), or (2) perform additional density testing to establish THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL DENSITY TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

COMPLIANCE FROM THE DISTRICT.

. PROBING WIRE TEST (SEE DETAIL)

2. HANDHELD PENETROMETER TEST (SEE DETAIL).

UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

3. TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED) 4. NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)

SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.

5. ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND

NOTE: SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION MITIGATION IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION. FOR ADDITIONAL REQUIREMENTS AND EXEMPTIONS SEE SECTION 19 "STANDARD FOR LAND GRADING" OF THE STANDARD. PROCEDURES FOR SOIL COMPACTION MITIGATION

PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER. 2. RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO

3. IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAY BE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.

CAFRA PERMIT PLAN

Joseph Raftery

NEW IERSEY LICENSED PROFESSIONAL ENGINEER

LICENSE NUMBER: GE53339 COLLIERS ENGINEERING & DESIGN, INC.

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RECREATIONAL AREA

**IMPROVEMENTS** 

BOROUGH OF MANASQUAN MONMOUTH COUNTY

**NEW JERSEY** 

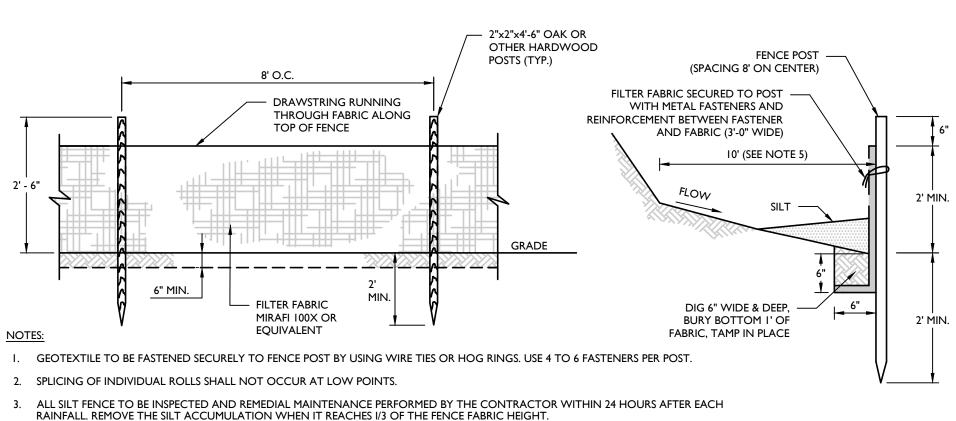
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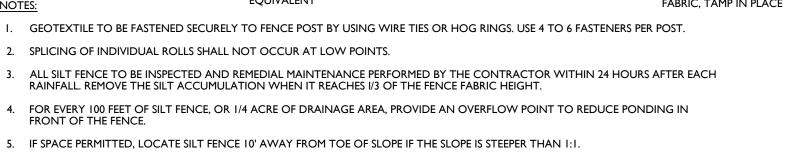
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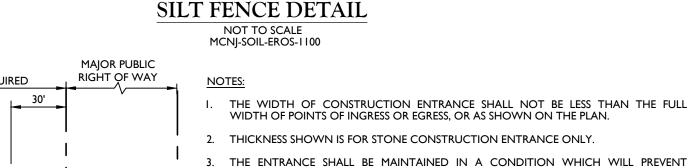
6/8/202 MSQ-078

SOIL EROSION & SEDIMENT CONTROL PLAN

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION







4" THICK

**ASPHALT** 

MAJOR PUBLIC

RIGHT OF WAY

4" THICK HMA BASE COURSE, MIX I-2 OR 19M64

(WITH PAVEMENT) DETAIL

MCNJ-SOIL-EROS-1001

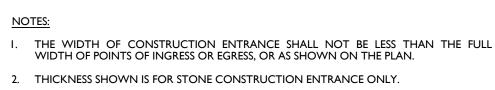
COMPACTED SUBGRADE

LENGTH OF STONE REQUIRED
SEE TABLE

______

EXISTING GROUND

(SEE NOTE I)



TRACKING OR FLOWING OF SEDIMENT ONTO ROADWAYS. THE ENTRANCE SHALL BE PERIODICALLY TOP DRESSED WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS ON-SITE CONDITIONS REQUIRE. SPILLED, DROPPED, WASHED, OR TRACKED SEDIMENT ONTO ROADWAYS OR OTHER IMPERVIOUS SURFACES SHALL BE REMOVED IMMEDIATELY.

WHERE ACCUMULATION OF DUST AND SEDIMENT IS INADEQUATELY CLEANED OR REMOVED BY CONVENTIONAL METHODS, A POWER BROOM OR STREET SWEEPER SHALL BE USED TO CLEAN PAVED AREAS. ALL OTHER ACCESS POINTS TO THE SITE WHICH DO NOT CONTAIN A CONSTRUCTION ACCESS PAD SHALL BE BLOCKED OFF.

8. STONE SIZE PER ASTM C-33, SIZE #2 ( $2\frac{1}{2}$ " TO I  $\frac{1}{2}$ ") OR #3 (2" TO I") STONE. INDIVIDUAL INTERIOR LOT INGRESS/EGRESS CONSTRUCTION ACCESS SHALL HAVE # 3 (I" TO 2") STONE, MINIMUM 10' (L) X 10' (W) AND 6" THICK.

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED		
	COARSE GRAINED SOILS	FINE GRAINED SOILS	
0% TO 2%	50 FT	100 FT	
2% TO 5%	100 FT	200 FT	
> 5%	ENTIRE SURFACE STABILIZED WITH HOT MIX ASPHA BASE COURSE, MIX I-2		

STABILIZED CONSTRUCTION ACCESS

ORANGE CONSTRUCTION NOT TO SCALE MCNJ-SOIL-EROS-1400